



THE UNIVERSITY OF CHICAGO
CENTER FOR CONTINUING EDUCATION

LASER BEAM INFORMATION SYSTEMS

A THREE-DAY INTENSIVE SEMINAR

- Facsimile & Hard Copy
- Computer Memory and COM
- Wideband Reconnaissance
- Photocomposition & Printing
- Image Manipulation & Display
- Image Sensing, Tracking & Q.C.

June 27-29, 1977 • NEW YORK CITY
August 15-17, 1977 • BOSTON

Apr 77

SEMINAR CONTENT

ADAPTING LASERS TO USABLE INFORMATION SYSTEMS:

Subject definitions, importance to audience, typical applications, audience interests, growth trends, seminar plans.

CHARACTERISTICS OF THE LASER IN INFORMATION SYSTEMS:

Laser fundamentals, applicable types and their optical radiation characteristics; signal modulation, bandwidth and noise in information systems.

OPTICAL BEAM MANIPULATION AND CONTROL:

Controlling beam propagation and focusing; optical components; aperture shape, vignetting and the resulting MTF; modulation and deflection principles and limitations; laser beam modulation techniques.

LASER BEAM DEFLECTION PRINCIPLES AND METHODS:

Organization of deflection technology; high inertia techniques—rotational opto-mechanics; low inertia techniques—vibrational and non-mechanical; iteration and intercavity optical principles.

LASER BEAM DEFLECTION TECHNIQUES:

Low speed precision scanning, high speed high resolution techniques; vibrational-mechanical techniques, gradient deflectors, iteration and intercavity techniques.

SENSING, DETECTION, AND STORAGE MEDIA:

Electronic and solid state light sensors and detectors, optical storage media—silver, non-silver film and volume storage media; laser power requirements for scanning and recording, granularity, homogeneity, and tonal range.

INFORMATION FACTORS AND SYSTEM SYNTHESSES:

Information, bits, grey scale, packing density; direct and holographic information storage and retrieval; multiplexing methods for multichannel and color; techniques for system synthesis.

APPLICATIONS SESSION:

Synthesizing real systems, solving practical problems; open class innovative adaptation of new knowledge.

LASER BEAM INFORMATION SYSTEMS

ADVANCED INPUT-OUTPUT DEVICES • DATA HANDLING • PRODUCT IMPROVEMENT

COMMENTS FROM PREVIOUS ATTENDEES

"An excellent, in-depth seminar on laser recorders, covering theory, components and applications, taught by an expert."

Gary W. Fuller
Project Engineer
Central Intelligence Agency

"Mr. Leo Beiser has outstanding knowledge of the laser system. I depart a better informed individual."

Richard E. Combs
Management Engineer
Argonne National Lab
Argonne, Illinois

"Excellent presentation by an experienced and respected contributor to the field."

Irving L. Wieselmann
Vice President, Product Programs
DataProducts Corp.
Woodland Hills, Ca.

"Excellent presentation and very practical."

Richard A. Marott
Section Manager
Aerospace Corp.
El Segundo, Ca.



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SEMINAR LEADER:
Leo Beiser

Prior to forming his professional consulting service one year ago, Leo Beiser was Manager of Research and Program Development at EPSCO Labs, Wilton Connecticut, and at CBS Laboratories, Stamford, Connecticut, Director of the Dennis Gabor Laboratory for Advanced Image Technology. With 25 years in image research and related component and systems engineering, and as the author of over 100 publications and inventions, Leo Beiser is often called upon to devote a portion of his professional activity to conduct seminars, moderate panel meetings and edit related technical journals and proceedings, principally in the field he pioneered — laser beam information systems. Leo Beiser holds Masters and Bachelor Degrees in Physics at Hofstra University, Hempstead, New York. In 1948, he graduated with honors, the E.E. Course of RCA Institutes, and in 1958, the Business Administration Course of Alexander Hamilton Institute. In 1966, he completed specialized Laser courses at U.C.L.A. He is a member of the American Physical Society, the Optical Society of America, the Society of Motion Picture and Television Engineers, the Society of Photographic Instrumentation Engineers, and is a Fellow and Regional Director of the Society for Information Display.

WHY YOU SHOULD ATTEND

This specialized three-day seminar covers the growing application of laser technology in image and data manipulation in the form of scanning, transmission, reproduction and control. The seminar material is prepared to transport the student through the principles and practice of laser beam information systems, in preparation for direct adaptation to such fields as facsimile, computer memory and display, target identification, reconnaissance, photocomposition, and image manipulation. Emphasis will be placed on innovative utilization of this mushrooming technology, culminating in the synthesis of real operational systems.

The principles and practical aspects of the technology will be emphasized, with little dependence upon mathematical formalism. Creative participation will be instilled, directed toward real system problem-solving.

This seminar is intended for technical management and marketing professionals along with advanced engineering and research personnel at the operating level of component development and system research and synthesis. The program is also geared to members of allied professions, such as optics, electronics, communications, graphics, and computer storage and display.

IN-COMPANY PROGRAMS

The program described in this brochure can be offered to your personnel on an "in-company" basis. In addition, it can be modified and tailored to your specific needs. In evaluating the possibility of using "in-company" training, you should consider costs, scheduling, workloads, interaction, environment, program content and a host of other factors. We would be delighted to provide you with an immediate response to your request for proposal, questions, problems, etc. Just write or call: William A. Kulok, Program Director, New York Management Center, 360 Lexington Avenue, New York, New York 10017 - Tel: (212) 953-7262.

CERTIFICATES OF PARTICIPATION

The University of Chicago Center for Continuing Education will award certificates to all attendees.

REGISTER EARLY FOR: LASER BEAM INFORMATION SYSTEMS

EARLY REGISTRATION IS ADVISED: To register, phone the registrar Toll Free 800/223-7450 from anywhere in the U.S. (New York State please call collect 212/953-7266). You may also register by completing the mail registration form below. All phone and mail registrations are confirmed by the registrar. Last-minute on-site registration is **not** encouraged.

SCHEDULE: Seminar hours are from 9:00 A.M. to 5:00 P.M. with a luncheon break from 1:00 P.M. to 2:15 P.M.

LOCATIONS: The seminars are held in comfortably arranged meeting rooms in conveniently located hotels. For exact hotel information and your room reservations, please call Toll Free 800/223-7450 from anywhere in the U.S. (New York State please call collect 212/953-7266) or you will receive hotel information in the mail when you register.

TRAVEL ARRANGEMENTS: To determine the feasibility of a group discount or if you would like us to handle your airline arrangements, please call Toll Free 800/223-7450 from anywhere in the U.S. (New York State please call collect 212/953-7266).

FEE: \$435 tuition fee per person plus \$60 registration fee per company (includes all workbook and handout materials).

TEAM REGISTRATION SAVINGS: Each registration after the first is subject to the tuition fee only, a savings of \$60 per registration. The full utilization of important knowledge usually requires discussion, support and cooperative effort. After the course your team will be able to implement and reinforce each member's efforts.

TRANSFERS AND SUBSTITUTIONS: Transfers or substitutions may be made at any time. If you cannot attend a program for which you are registered, the entire tuition may be credited to any other program over the following twelve-month period, protecting you against any increase in fees. If no transfer or substitution is desired a refund of your payment may be made, less the \$60 registration fee.

CERTIFICATES OF PARTICIPATION: The University of Chicago Center for Continuing Education will award certificates to all attendees.

TAX DEDUCTION OF EXPENSES: An income tax deduction is allowed for expenses of education (including registration fees, travel, meals, lodging) undertaken to maintain and improve professional skills (see Treas. Reg. 1.162-5) (Coughlin vs. Commissioner, 203 F.2d 307).

MAILING LIST: If you would like to be on a specific list or you desire to have your name deleted, please contact William A. Kulok, Program Director, New York Management Center, 360 Lexington Avenue, New York, N.Y. 10017. If you receive more than one copy of this brochure in the mail we suggest passing the additional copies along to your colleagues who might benefit from the information.

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LASER BEAM INFORMATION SYSTEMS is presented by the Center for Continuing Education, The University of Chicago and coordinated by New York Management Center, an independent educational organization that works with universities, consulting firms, publishers and other professional groups in the design and delivery of seminars and conferences for business and government.

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BROCHURES DESCRIBING THESE OTHER UNIVERSITY OF CHICAGO CENTER FOR CONTINUING EDUCATION SEMINARS ARE AVAILABLE

Check the subjects of interest to you or your organization for details by return mail without obligation. You may also call Toll Free 800/223-7450 from anywhere in the U.S. (New York State please call collect 212/953-7266) for the locations and dates of these nationally held seminars.

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REGISTRATION FORM - LASER BEAM INFORMATION SYSTEMS

- ☐ PLEASE SEND INFORMATION ON THE SEMINARS CHECKED ABOVE
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New York Management Center
360 Lexington Avenue
New York, N.Y. 10017

- ☐ Check is enclosed
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DATES (check where applicable)

- ☐ June 27-29, 1977 - NEW YORK CITY
- ☐ August 15-17, 1977 - BOSTON



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